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EXAMINER	
ALIA, CURTIS A	

ART UNIT	PAPER NUMBER
2474	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/790,946	SUWALA ET AL.	
	Examiner	Art Unit	
	Curtis A. Alia	2474	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 April 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11,13-18 and 20-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11,13-18 and 20-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicant's amendment filed 26 April 2010 has been entered. Claims 1-11, 13-18 and 20-24 are still pending in this application, with claims 1, 11 and 18 being independent.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Response to Arguments

1. Applicant's arguments with respect to claims 1-11, 13-18 and 20-24 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. Claims 1-4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blackmon et al. (newly cited US 6,879,559) in view of Roberts (newly cited US 7,428,209).

Regarding claim 1, Blackmon discloses a device configured for protection switching, the device comprising:

a detector within the device (see figure 3, column 8, lines 51+, ASIC modules are controllers for the switching of data and failure detection, and a single ASIC can perform all controller functions);

and a first protector within the device, with the first protector configured to perform protection switching in response to one or more notifications of a condition received from the detector (see figure 3 and column 5, lines 58+, processor (ASIC) notices a failure in a packet forwarding module and notifies modules to switch so that a protection module takes over the functionality of the failed module);

wherein the detector is configured to notify the first protector of the condition upon detection of the condition (see column 5, lines 58+, processor (ASIC) notices a failure in a packet forwarding module and notifies modules to switch so that a protection module takes over the functionality of the failed module).

Blackmon does not explicitly teach that the first protector is configured to register with the detector to be notified of the condition and that the detector is configured to receive one or more registration requests from the first protector.

However, the above-mentioned claimed limitation is well known in the art, as evidenced by Roberts. In particular, Roberts teaches that the first protector is configured to register with the detector to be notified of the condition and that the detector is configured to receive one or more registration requests from the first protector (see figure 7 and column 10, lines 1+, identifiers of line cards in the router are stored with particular information regarding which routes that particular line card can act as a backup for, thus registering with the detector to notify the particular line card of certain failures that can be fixed by that particular line card).

In view of the above, having the device of Blackmon, then given the well-established teaching of Roberts, it would have been obvious to a person having ordinary skill in the art at the

time of the invention to modify the device of Blackmon as taught by Roberts, since Roberts stated that recovering from network component failure can be improved.

Regarding claim 2, Blackmon discloses that said protection switching includes switching the physical path of traffic from a working facility to a backup facility while maintaining an UP state indication of a single logical interface including the working facility and the backup facility such that higher-level routing information does not change in response to said switching the physical path (see column 3, lines 19+, the protection switching procedure allows the failure to be transparent to all external peer routers, thus other routers would not notice a change in the higher level routing whatsoever).

Regarding claim 3, Blackmon discloses that said protection switching includes switching traffic to a backup facility from a facility corresponding to the condition (see column 5, lines 57+, upon failure detection the notification indicates to affected switch traffic to switch from one channel to another so as to route to the proper backup facility in response to the condition).

Regarding claim 4, Blackmon discloses that said protection switching includes switching traffic to a backup component from a component corresponding to the condition (see column 5, lines 57+, upon failure detection the notification indicates to affected switch traffic to switch from one channel to another so as to route to the proper backup facility in response to the condition).

Regarding claim 8, Blackmon does not explicitly teach a second protector;

wherein the second protector is configured to perform protection switching in response to one or more notifications received from the first protector and the detector, to register with the first protector to be notified of a particular condition, and to register with the detector to be notified of a second particular condition; wherein the first protector is configured to send a notification of the particular condition to the second protector in response to the notification of the particular condition by the detector, and register with the detector to be notified of the particular condition; and wherein the detector is configured to receive one or more registration requests from the first and second protectors, to notify the first protector upon detection of the particular condition, and to notify the second protector upon detection of the second particular condition.

However, the above-mentioned claimed limitation is well known in the art, as evidenced by Roberts. In particular, Roberts teaches that the device comprises a second protector (see figure 2 and column 6, lines 54+, there is a plurality of line cards in the router each configurable to act as either working line cards or protection line cards, where more that one line card can be configured to be protection cards, a second protection line card is the second protector) and that the first protector is configured to register with the detector to be notified of the condition (see figure 7 and column 10, lines 1+, identifiers of line cards in the router are stored with particular information regarding which routes that particular line card can act as a backup for, thus registering with the detector to notify the particular line card of certain failures that can be fixed by that particular line card) and.

In view of the above, having the device of Blackmon, then given the well-established teaching of Roberts, it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the device of Blackmon as taught by Roberts, since Roberts stated that recovering from network component failure can be improved.

With this combination, the same action as taught by Blackmon can be performed on each of the protection line cards taught by Ikeda.

3. Claims 5, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blackmon in view of Roberts as applied to claim 1, and further in view of Ikeda et al. (previously cited US 6,144,633).

Regarding claim 5, Blackmon discloses that the detector is configured to identify the particular condition, and to notify the first protector of the particular condition upon detection of the particular condition (see column 5, lines 58+, processor (ASIC) notices a failure in a packet forwarding module and notifies modules to switch so that a protection module takes over the functionality of the failed module).

Blackmon does not explicitly teach that the first protector is configured to register with the detector to be notified of the particular condition or that the device comprises a second detector.

However, the above-mentioned claimed limitation is well known in the art, as evidenced by Roberts. In particular, Roberts teaches that the first protector is configured to register with the detector to be notified of the condition (see figure 7 and column 10, lines 1+, identifiers of

line cards in the router are stored with particular information regarding which routes that particular line card can act as a backup for, thus registering with the detector to notify the particular line card of certain failures that can be fixed by that particular line card) and that the device comprises a second protector (see figure 2 and column 6, lines 54+, there is a plurality of line cards in the router each configurable to act as either working line cards or protection line cards, where more that one line card can be configured to be protection cards, a second protection line card is the second protector).

In view of the above, having the device of Blackmon, then given the well-established teaching of Roberts, it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the device of Blackmon as taught by Roberts, since Roberts stated that recovering from network component failure can be improved.

Blackmon and Roberts do not explicitly teach that the second protector is configured to perform protection switching in response to one or more notifications received from the first protector, and to register with the first protector to be notified of a particular condition and wherein the first protector is configured to receive one or more registration requests from the second protector, to notify the second protector upon notification of the particular condition.

However, the above-mentioned claimed limitation is well known in the art, as evidenced by Ikeda. In particular, Ikeda teaches that the second protector is configured to perform protection switching in response to one or more notifications received from the first protector, and to register with the first protector to be notified of a particular condition and wherein the first protector is configured to receive one or more registration requests from the second protector, to notify the second protector upon notification of the particular condition, and to register with the

detector to be notified of the particular condition (see column 25, lines 30-40, if the equipment (first protector) is already performing switching on the protection line needed (was previously notified of another condition), the request is passed through while continuing to switch the previously switched information via an overlap bridge request (forwarding the request to a second protector)).

In view of the above, having the device of Blackmon and Roberts, then given the well-established teaching of Ikeda, it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the device of Blackmon and Roberts as taught by Ikeda since Ikeda stated that high speed transmission can be realized while still maintaining large network tables that carry important network status/failure information.

Regarding claim 6, Blackmon discloses that the detector is configured to identify the particular condition, and to notify the first protector of the particular condition upon detection of the particular condition (see column 5, lines 58+, processor (ASIC) notices a failure in a packet forwarding module and notifies modules to switch so that a protection module takes over the functionality of the failed module).

Blackmon does not explicitly teach that the first protector is configured to register with the detector to be notified of the particular condition or that the device comprises a second protector.

However, the above-mentioned claimed limitation is well known in the art, as evidenced by Roberts. In particular, Roberts teaches that the first protector is configured to register with the detector to be notified of the condition (see figure 7 and column 10, lines 1+, identifiers of

line cards in the router are stored with particular information regarding which routes that particular line card can act as a backup for, thus registering with the detector to notify the particular line card of certain failures that can be fixed by that particular line card) and that the device comprises a second protector (see figure 2 and column 6, lines 54+, there is a plurality of line cards in the router each configurable to act as either working line cards or protection line cards, where more that one line card can be configured to be protection cards, a second protection line card is the second protector).

In view of the above, having the device of Blackmon, then given the well-established teaching of Roberts, it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the device of Blackmon as taught by Roberts, since Roberts stated that recovering from network component failure can be improved.

Blackmon and Roberts do not explicitly teach that the second protector is configured to perform protection switching in response to one or more notifications received from the first protector, and to register with the first protector to be notified of a particular condition and wherein the first protector is configured to receive one or more registration requests from the second protector, to notify the second protector upon notification of the particular condition if previously notified of another particular condition else not to notify the second protector of the particular condition.

However, the above-mentioned claimed limitation is well known in the art, as evidenced by Ikeda. In particular, Ikeda teaches that the second protector is configured to perform protection switching in response to one or more notifications received from the first protector, and to register with the first protector to be notified of a particular condition and wherein the first

protector is configured to receive one or more registration requests from the second protector, to notify the second protector upon notification of the particular condition if previously notified of another particular condition else not to notify the second protector of the particular condition (see column 25, lines 30-40, if the equipment (first protector) is already performing switching on the protection line needed (was previously notified of another condition), the request is passed through while continuing to switch the previously switched information via an overlap bridge request (forwarding the request to a second protector)).

In view of the above, having the device of Blackmon and Roberts, then given the well-established teaching of Ikeda, it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the device of Blackmon and Roberts as taught by Ikeda since Ikeda stated that high speed transmission can be realized while still maintaining large network tables that carry important network status/failure information.

Regarding claim 7, Blackmon discloses that the detector is configured to identify the particular condition, and to notify the first protector of the particular condition upon detection of the particular condition (see column 5, lines 58+, processor (ASIC) notices a failure in a packet forwarding module and notifies modules to switch so that a protection module takes over the functionality of the failed module).

Blackmon does not explicitly teach that the first protector is configured to register with the detector to be notified of the particular condition or that the device comprises a second protector.

However, the above-mentioned claimed limitation is well known in the art, as evidenced by Roberts. In particular, Roberts teaches that the first protector is configured to register with the detector to be notified of the condition (see figure 7 and column 10, lines 1+, identifiers of line cards in the router are stored with particular information regarding which routes that particular line card can act as a backup for, thus registering with the detector to notify the particular line card of certain failures that can be fixed by that particular line card) and that the device comprises a second protector (see figure 2 and column 6, lines 54+, there is a plurality of line cards in the router each configurable to act as either working line cards or protection line cards, where more that one line card can be configured to be protection cards, a second protection line card is the second protector).

In view of the above, having the device of Blackmon, then given the well-established teaching of Roberts, it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the device of Blackmon as taught by Roberts, since Roberts stated that recovering from network component failure can be improved.

Blackmon and Roberts do not explicitly teach that the second protector is configured to perform protection switching in response to one or more notifications received from the first protector, and to register with the first protector to be notified of a particular condition and wherein the first protector is configured to receive one or more registration requests from the second protector, to notify the second protector upon notification of the particular condition if not previously notified of another particular condition else not to notify the second protector of the particular condition.

However, the above-mentioned claimed limitation is well known in the art, as evidenced by Ikeda. In particular, Ikeda teaches that the second protector is configured to perform protection switching in response to one or more notifications received from the first protector, and to register with the first protector to be notified of a particular condition and wherein the first protector is configured to receive one or more registration requests from the second protector, to notify the second protector upon notification of the particular condition if not previously notified of another particular condition else not to notify the second protector of the particular condition (see column 25, lines 30-40, if the equipment (first protector) is already performing switching on the protection line needed (was previously notified of another condition), the request is passed through while continuing to switch the previously switched information via an overlap bridge request (forwarding the request to a second protector)). The contrapositive of the teaching of Ikeda would have been an obvious matter of design choice to one of ordinary skill in the art.

In view of the above, having the device of Blackmon and Roberts, then given the well-established teaching of Ikeda, it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the device of Blackmon and Roberts as taught by Ikeda since Ikeda stated that high speed transmission can be realized while still maintaining large network tables that carry important network status/failure information.

4. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blackmon in view of Roberts as applied to claim 1 above, and further in view of Lindskog et al. (previously cited US 6,665,262).

Regarding claim 9, Blackmon discloses that the detector is configured to identify the particular condition, and to notify the first protector of the particular condition upon detection of the particular condition (see column 5, lines 58+, processor (ASIC) notices a failure in a packet forwarding module and notifies modules to switch so that a protection module takes over the functionality of the failed module).

Blackmon does not explicitly teach that the first protector is configured to register with the detector to be notified of the particular condition or that the device comprises a second protector.

However, the above-mentioned claimed limitation is well known in the art, as evidenced by Roberts. In particular, Roberts teaches that the first protector is configured to register with the detector to be notified of the condition (see figure 7 and column 10, lines 1+, identifiers of line cards in the router are stored with particular information regarding which routes that particular line card can act as a backup for, thus registering with the detector to notify the particular line card of certain failures that can be fixed by that particular line card) and that the device comprises a second protector (see figure 2 and column 6, lines 54+, there is a plurality of line cards in the router each configurable to act as either working line cards or protection line cards, where more that one line card can be configured to be protection cards, a second protection line card is the second protector).

In view of the above, having the device of Blackmon, then given the well-established teaching of Roberts, it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the device of Blackmon as taught by Roberts, since Roberts stated that recovering from network component failure can be improved.

Blackmon and Roberts do not explicitly teach that the first protector is further configured to attempt to protection switch upon notification of the particular condition, and in response to the attempted protection switch failing, notifying the second protector of the particular condition, else not notifying the second protector of the particular condition.

However, the above-mentioned claimed limitation is well known in the art, as evidenced by Lindskog. In particular, Lindskog teaches that the first protector is further configured to attempt to protection switch upon notification of the particular condition, and in response to the attempted protection switch failing, notifying the second protector of the particular condition, else not notifying the second protector of the particular condition. (see column 3, lines 28-32, fault agent determines if the underlying fault that caused the alarm can be handled at the current node (interpreted as attempting to handle the fault, the fault handling being the protection switching of a failed link/node in Finn), if not the fault agent produces a new alarm…and passes the new alarm to an interconnected fault agent (the second protector)).

In view of the above, having the device of Blackmon and Roberts, then given the well-established teaching of Lindskog, it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the device of Blackmon and Roberts as taught by Lindskog since Lindskog stated that the recursive way that alarm messages are passed down the hierarchy distributes the work each node has to do to recover from the fault.

Regarding claim 10, Blackmon does not explicitly teach that the device comprises a second protector and a third protector or that the second protector is configured to register with

the first protector to be notified of the condition or that the third protector is configured to register with the second protector to be notified of the condition.

However, the above-mentioned claimed limitation is well known in the art, as evidenced by Roberts. In particular, Roberts teaches that the first protector is configured to register with the detector to be notified of the condition (see figure 7 and column 10, lines 1+, identifiers of line cards in the router are stored with particular information regarding which routes that particular line card can act as a backup for, thus registering with the detector to notify the particular line card of certain failures that can be fixed by that particular line card) and that the device comprises a second protector and a third protector (see figure 2 and column 6, lines 54+, there is a plurality of line cards in the router each configurable to act as either working line cards or protection line cards, where more that one line card can be configured to be protection cards, a second protection line card is the second protector).

In view of the above, having the device of Blackmon, then given the well-established teaching of Roberts, it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the device of Blackmon as taught by Roberts, since Roberts stated that recovering from network component failure can be improved.

Blackmon and Roberts do not explicitly teach that the second protector is configured to perform protection switching in response to one or more notifications received from the first protector; wherein the first protector is configured to receive one or more registration requests from the second protector, and to determine whether or not to cause a protection switch or to notify the second protector of the condition; wherein the third protector is configured to perform protection switching in response to one or more notifications received from the second protector,

and to determine whether or not to cause a protection switch or to notify the third protector of the condition.

However, the above-mentioned claimed limitation is well known in the art, as evidenced by Lindskog. In particular, Lindskog teaches that the second protector is configured to perform protection switching in response to one or more notifications received from the first protector; wherein the first protector is configured to receive one or more registration requests from the second protector, and to determine whether or not to cause a protection switch or to notify the second protector of the condition; wherein the third protector is configured to perform protection switching in response to one or more notifications received from the second protector, and to determine whether or not to cause a protection switch or to notify the third protector of the condition. (see column 3, lines 28-38, each node comprises a fault agent that is capable of making a decision as to whether it can fix the fault in the network, and if it cannot, then it forwards an alarm message to its interconnected nodes, and they repeat this operation until the fault is recovered from, and thus teaches the multiple redundancy performed by the second and third protectors).

In view of the above, having the device of Blackmon and Roberts, then given the well-established teaching of Lindskog, it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the device of Blackmon and Roberts as taught by Lindskog since Lindskog stated that the recursive way that alarm messages are passed down the hierarchy distributes the work each node has to do to recover from the fault.

5. Claims 11, 13-18 and 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blackmon in view of Lindskog.

Regarding claim 11, Blackmon discloses a device configured for protection switching, the device comprising:

a detector, within the device, with the detector configured to detect a particular condition and to notify a first protector of the particular condition (see figure 3, column 8, lines 51+, ASIC modules are controllers for the switching of data and failure detection, and a single ASIC can perform all controller functions);

the first protector, within the device, with the first protector configured to receive an indication of the particular condition from the detector, and to identifying whether or not to (a) perform protection switching itself based on the particular condition (see figure 3 and column 5, lines 58+, processor (ASIC) notices a failure in a packet forwarding module and notifies modules to switch so that a protection module takes over the functionality of the failed module).

Blackmon does not explicitly teach (b) to notify a second protector of the particular condition for the second protector to perform protection switching; and

the second protector, within the device, with the second protector configured to receive a notification of the particular condition from the first protector, and in response to perform protection switching based on the particular condition;

wherein said identifying whether or not to (a) perform protection switching itself based on the particular condition or (b) to notify the second protector of the particular condition

includes: attempting by the first protector to protection switch, and in response to failure of said protection switch, to notify the second protector of the particular condition.

However, the above-mentioned claimed limitation is well known in the art, as evidenced by Lindskog. In particular, Lindskog teaches that the first protector is configured to identify whether to perform protection switching itself based on the particular condition or to notify a second protector of the particular condition for the second protector to perform the protection switching, and the second protector is configured to receive a notification of the particular condition from the first protector, and in response to perform protection switching based on the particular condition (see column 3, lines 28-34, each node comprises a fault agent that is capable of making a decision as to whether it can fix the fault in the network, and if it cannot, then it forwards an alarm message to its interconnected nodes, and they repeat this operation until the fault is recovered from) and that identifying whether to perform protection switching itself based on the particular condition or to notify a second protector of the particular condition includes attempting by the first protector to protection switch, and in response of the protection switch, to notify the second protector of the particular condition (see column 3, lines 26-32, a node comprises a fault agent that is capable of making a decision as to whether it can fix the fault in the network, and if it cannot fix or recover from the fault, then it passes a new alarm message to another node to perform the same operation).

In view of the above, having the device of Blackmon, then given the well-established teaching of Lindskog, it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the device of Blackmon as taught by Lindskog since Lindskog stated that the recursive way that alarm messages are passed down the hierarchy

distributes the work each component has to do to recover from the fault, and this node to node decision making concept can be applied to the line cards to achieve similar results.

Regarding claim 13, Blackmon does not explicitly teach that identifying whether to perform protection switching itself based on the particular condition or to notify a second protector of the particular condition includes referencing a data structure to identify whether a second particular condition has been previously identified by a detector.

However, the above-mentioned claimed limitation is well known in the art, as evidenced by Lindskog. In particular, Lindskog teaches that identifying whether to perform protection switching itself based on the particular condition or to notify a second protector of the particular condition includes referencing a data structure to identify whether a second particular condition has been previously identified by a detector (see column 3, lines 56-60, when an event generator receives information from each node regarding the fault alarm, it collects this data and updates the fault information in an event database, thus allowing nodes to check whether another node has looked at a specific fault).

In view of the above, having the device of Blackmon, then given the well-established teaching of Lindskog, it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the device of Blackmon as taught by Lindskog since Lindskog stated that the recursive way that alarm messages are passed down the hierarchy distributes the work each node has to do to recover from the fault.

Regarding claim 14, Blackmon does not explicitly teach that identifying whether to perform protection switching itself based on the particular condition or to notify a second protector of the particular condition includes referencing a data structure to identify whether a second particular condition is determined based on a fixed or programmed set of rules or user configuration commands.

However, the above-mentioned claimed limitation is well known in the art, as evidenced by Lindskog. In particular, Lindskog teaches that identifying whether to perform protection switching itself based on the particular condition or to notify a second protector of the particular condition includes referencing a data structure to identify whether a second particular condition is determined based on a fixed or programmed set of rules or user configuration commands (see column 4, lines 5-10, after each node returns information to the event generator, the event generator then sends the updated configuration information to any subsequent node that is determining whether it can handle the fault, thus dynamically changing the rules for determination at each node).

In view of the above, having the device of Blackmon, then given the well-established teaching of Lindskog, it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the device of Blackmon as taught by Lindskog since Lindskog stated that the recursive way that alarm messages are passed down the hierarchy distributes the work each node has to do to recover from the fault.

Regarding claim 15, Blackmon discloses that the detector is further configured to detect a second particular condition and to notify the second protector of the second condition (see

column 10, lines 34+, control processor in the detector decides the best way to perform the protection switching by analyzing the situation, thus making the decision to perform a second protection switching procedure instead of a first protection switching procedure based on the specific conditions).

Regarding claim 16, Blackmon does not explicitly teach that the second protector is configured to identify whether to perform protection switching itself based on the second particular condition or to notify a third protector of the second particular condition for the third protector to perform protection switching.

However, the above-mentioned claimed limitation is well known in the art, as evidenced by Lindskog. In particular, Lindskog teaches that the second protector is configured to identify whether to perform protection switching itself based on the second particular condition or to notify a third protector of the second particular condition for the third protector to perform protection switching (see column 3, lines 28-34, each node comprises a fault agent that is capable of making a decision as to whether it can fix the fault in the network, and if it cannot, then it forwards an alarm message to its interconnected nodes, and they repeat this operation until the fault is recovered from).

In view of the above, having the device of Blackmon, then given the well-established teaching of Lindskog, it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the device of Blackmon as taught by Lindskog since Lindskog stated that the recursive way that alarm messages are passed down the hierarchy distributes the work each node has to do to recover from the fault.

Regarding claim 17, Blackmon does not explicitly teach that identifying whether to perform protection switching itself based on the second particular condition or to notify a second protector of the second particular condition is determined based on a fixed or programmed set of rules or user configurable commands.

However, the above-mentioned claimed limitation is well known in the art, as evidenced by Lindskog. In particular, Lindskog teaches that identifying whether to perform protection switching itself based on the second particular condition or to notify a second protector of the second particular condition is determined based on a fixed or programmed set of rules or user configurable commands (see column 4, lines 5-10, after each node returns information to the event generator, the event generator then sends the updated configuration information to any subsequent node that is determining whether it can handle the fault, thus dynamically changing the rules for determination at each node).

In view of the above, having the device of Blackmon, then given the well-established teaching of Lindskog, it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the device of Blackmon as taught by Lindskog since Lindskog stated that the recursive way that alarm messages are passed down the hierarchy distributes the work each node has to do to recover from the fault.

Regarding claim 18, Blackmon discloses a device configured for protection switching, the device comprising:

a detector, within the device, with the detector including means for detecting a particular condition and to notify a first protector of the particular condition (see figure 3, column 8, lines 51+, ASIC modules are controllers for the switching of data and failure detection, and a single ASIC can perform all controller functions);

the first protector, within the device, with the first protector including means for receiving an indication of the particular condition from the detector, and to identifying whether or not to (a) perform protection switching itself based on the particular condition (see figure 3 and column 5, lines 58+, processor (ASIC) notices a failure in a packet forwarding module and notifies modules to switch so that a protection module takes over the functionality of the failed module).

Blackmon does not explicitly teach that the first protector includes means for identifying to notify a second protector of the particular condition for the particular condition to perform protection switching and that the means for identifying whether to perform protection switching itself based on the particular condition or to notify a second protector of the particular condition includes means for attempting by the first protector to protection switch and in response to failure of the protection switch, to notify the second protector of the particular condition.

However, the above-mentioned claimed limitation is well known in the art, as evidenced by Lindskog. In particular, Lindskog teaches that the first protector includes means for identifying whether to notify a second protector of the particular condition for the particular condition to perform protection switching (see column 3, lines 56-60, when an event generator receives information from each node regarding the fault alarm, it collects this data and updates the fault information in an event database, thus allowing nodes to check whether another node

has looked at a specific fault) and that the means for identifying whether to perform protection switching itself based on the particular condition or to notify a second protector of the particular condition includes means for attempting by the first protector to protection switch and in response to failure of the protection switch, to notify the second protector of the particular condition (see column 3, lines 26-32, a node comprises a fault agent that is capable of making a decision as to whether it can fix the fault in the network, and if it cannot fix or recover from the fault, then it passes a new alarm message to another node to perform the same operation).

In view of the above, having the device of Blackmon, then given the well-established teaching of Lindskog, it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the device of Blackmon as taught by Lindskog since Lindskog stated that the recursive way that alarm messages are passed down the hierarchy distributes the work each node has to do to recover from the fault.

Regarding claim 20, Blackmon does not explicitly teach that the first protector includes means for identifying whether to perform protection switching itself based on the particular condition or to notify a second protector of the particular condition includes means for referencing a data structure to identify whether a second particular condition has been previously identified by a detector.

However, the above-mentioned claimed limitation is well known in the art, as evidenced by Lindskog. In particular, Lindskog teaches that the first protector includes means for identifying whether to perform protection switching itself based on the particular condition or to notify a second protector of the particular condition includes means for referencing a data

structure to identify whether a second particular condition has been previously identified by a detector (see column 3, lines 56-60, when an event generator receives information from each node regarding the fault alarm, it collects this data and updates the fault information in an event database, thus allowing nodes to check whether another node has looked at a specific fault).

In view of the above, having the device of Blackmon, then given the well-established teaching of Lindskog, it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the device of Blackmon as taught by Lindskog since Lindskog stated that the recursive way that alarm messages are passed down the hierarchy distributes the work each node has to do to recover from the fault.

Regarding claim 21, Blackmon discloses that the detector includes means for detecting a second particular condition and means for notifying the second protector of the second condition (see column 10, lines 34+, control processor in the detector decides the best way to perform the protection switching by analyzing the situation, thus making the decision to perform a second protection switching procedure instead of a first protection switching procedure based on the specific conditions).

Regarding claim 22, Finn does not explicitly teach that the second protector includes means for identifying whether to perform protection switching itself based on the second particular condition or to notify a third protector of the second particular condition for the third protector to perform protection switching.

However, the above-mentioned claimed limitation is well known in the art, as evidenced by Lindskog. In particular, Lindskog teaches that the second protector includes means for identifying whether to perform protection switching itself based on the second particular condition or to notify a third protector of the second particular condition for the third protector to perform protection switching (see column 3, lines 28-34, each node comprises a fault agent that is capable of making a decision as to whether it can fix the fault in the network, and if it cannot, then it forwards an alarm message to its interconnected nodes, and they repeat this operation until the fault is recovered from).

In view of the above, having the device of Finn, then given the well-established teaching of Lindskog, it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the device of Finn as taught by Lindskog since Lindskog stated that the recursive way that alarm messages are passed down the hierarchy distributes the work each node has to do to recover from the fault.

6. Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blackmon in view of Lindskog as applied to claim 11 above, and further in view of Roberts.

Regarding claim 23, Blackmon does not explicitly teach that the first protector is configured to register with the detector to be notified of the condition.

However, the above-mentioned claimed limitation is well known in the art, as evidenced by Roberts. In particular, Roberts teaches that the first protector is configured to register with the detector to be notified of the condition (see figure 7 and column 10, lines 1+, identifiers of

line cards in the router are stored with particular information regarding which routes that particular line card can act as a backup for, thus registering with the detector to notify the particular line card of certain failures that can be fixed by that particular line card).

In view of the above, having the device of Blackmon, then given the well-established teaching of Roberts, it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the device of Blackmon as taught by Roberts, since Roberts stated that recovering from network component failure can be improved.

Regarding claim 24, Blackmon does not explicitly teach that the second protector is configured to register with the first protector to be notified of the condition.

However, the above-mentioned claimed limitation is well known in the art, as evidenced by Roberts. In particular, Roberts teaches that the second protector is configured to register with the first protector to be notified of the condition (see figure 7 and column 10, lines 1+, identifiers of line cards in the router are stored with particular information regarding which routes that particular line card can act as a backup for, thus registering with the detector to notify the particular line card of certain failures that can be fixed by that particular line card).

In view of the above, having the device of Blackmon, then given the well-established teaching of Roberts, it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the device of Blackmon as taught by Roberts, since Roberts stated that recovering from network component failure can be improved.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Curtis A. Alia whose telephone number is (571) 270-3116. The examiner can normally be reached on Monday through Friday, 9am-6pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Aung S. Moe can be reached on (571) 272-7314. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. Regarding more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aung S. Moe/
Supervisory Patent Examiner, Art Unit 2474

/Curtis A Alia/
Examiner, Art Unit 2474
7/6/2010

CAA